

REMARKS

Status of the Claims

Upon entry of the foregoing amendments, claims 1-32 are pending. Claims 9, 11, 19, 24 and 25 have been amended herein and new claim 32 has been added. Support for these amendments is found throughout the specification and in the claims as originally filed. *See e.g.*, page 12, paragraph [0033], and originally filed claim 23. Applicants respectfully submit the above amendments do not constitute new matter.

Response to Restriction Requirement

The Office Action requires restriction to one of Groups I-IV, provided *infra*, which are purportedly not so linked as to form a single general inventive concept under PCT Rule 13.1. The Office Action requires that Applicants elect one of the following four inventions:

- Group I: Claims 1-3, 7-8 and 23 (partial), drawn to a method for introducing a foreign DNA of interest into a preselected site of a genome of a plant cell wherein the method requires that flanking region of gene of interest has at least 80% identity to a DNA region flanking the preselected site.
- Group II: Claims 1-2, 4-8, 11-18, 23 (partial) and 31, drawn to a method for introducing a foreign DNA of interest into a preselected site of a genome of a plant cell, wherein the double stranded DNA break at the preselected site is made by a rare cutting restriction enzyme.
- Group III: Claims 1-2, 7-10, 19-22, and 23 (partial), drawn to a method for introducing a foreign DNA of interest into a preselected site of a genome of a plant cell, wherein an additional step, which is incubating the cell in a plant phenolic compound, is required.
- Group IV: Claims 24-30, drawn to isolated DNA fragments.

Applicants hereby provisionally elect **Group IV**, which covers, according to the Office Action, claims 24-30 and is drawn to isolated DNA fragments, **with traverse**. Applicants also hereby provisionally elect SEQ ID NO: 3 **with traverse**. Applicants reserve the right to file one or more divisional applications to the non-elected subject matter. Applicants respectfully request reconsideration of the Restriction Requirement in view of the following remarks.

According to the Office Action, the inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding technical features. The Office Action asserts that Choulika et al. (Pub. No. US 2002/0107214) anticipates technical feature as characterized by the Examiner..

Applicants respectfully disagree and traverse. Initially, Applicants note that the Examiner's grouping of claims is inconsistent with the lack of unity set forth by the International Searching Authority applying the same PCT Rules. Indeed, the International Searching Authority identified claims 1-23 as being in the same group, whereas the Office Action restricts these claims into Groups I-III. Accordingly, Applicants request that the restriction set forth in the Office Action, with respect to claims 1-23, be consistent with the lack of unity set forth by the International Searching Authority.

Applicants also respectfully disagree with the Examiner's assertion that Choulika teaches a method of repairing a specific sequence of interest in chromosomal DNA of a cell as disclosed in the present application. Indeed, Choulika is silent regarding the use of the claimed methods in plant cells and by direct DNA transfer, let alone that such methods would lead to an increase in efficiency when compared with the efficiency using *Agrobacterium*-mediated DNA delivery (as demonstrated in the current application, *see e.g.*, Examples 3 and 5).

Applicants also submit that Choulika does not teach or suggest the limitations of independent claims 11, 21, and 23. For example, claim 11 is directed to a method for introducing a foreign DNA of interest into a preselected site of a genome of a plant cell wherein the double-stranded DNA break is induced by an I-SceI endonuclease encoded by a nucleotide sequence as specified in claim 24. Choulika does not teach or suggest the use of such an I-SceI endonuclease.

According to the Office Action, the inventions listed as Group IV and Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding technical features. The Examiner asserts that the methods of Groups I-III do not require the double-stranded DNA break being introduced by I-Sce I restriction enzyme and therefore do not require nucleotide sequences of Group IV.

Applicants respectfully disagree and traverse. Applicants submit that the methods of claims 5, 11-20 (as amended), and new claim 32 require the nucleotide sequences of claim 24. Accordingly, claims 5 (which depends from claim 4 and, thus, from claim 1), 11-20, 24-30, and 32 all contain the same special technical feature according to PCT Rule 13.2, namely, I-SceI encoding nucleotide

sequences optimized for use in plants according to the specified optimization scheme. Applicants therefore request that at least claims 1, 4, 5, 11-20 and 32 be examined with Group IV.

For Group IV, the Examiner requests a further restriction to one of the sequences SEQ ID NOS: 1-4 on the ground that different nucleotide sequences and amino acid sequences are structurally distinct chemical compounds and are unrelated to one another. Applicants respectfully traverse this restriction requirement.

Initially, Applicants note that the products to which claims 24-30 refer are all of the same chemical nature — nucleic acids. Accordingly, claims 24-30 refer to nucleic acid sequences, rather than both amino acid sequences and nucleic acid sequences as suggested in the Office Action.

Applicants submit that the nucleic acid sequences of claims 24-30 are related. Indeed, the DNA fragments of claims 24-30 share the following same common elements: (i) they encode an I-SceI endonuclease with the amino acid sequence SEQ ID NO: 1; and (ii) they comprise a nucleotide sequence fulfilling the provisos listed in claim 24. Accordingly, Claim 24 is a generic claim that covers multiple nucleotide sequences sharing the same technical features (i.e., those indicated in claim 24).

The nucleotide sequence of SEQ ID NO: 4 is a specific sequence which is also included in the nucleotide sequences covered by SEQ ID NO: 3 and the provisos recited in claim 26, which itself is included in the nucleotide sequences covered by SEQ ID NO: 2 and the provisos recited in claim 25. Therefore, SEQ ID NO: 4 is a species of the genus of sequences covered by claim 26, which is in its turn a species of the bigger genus of sequences covered by claim 25, which is in its turn a species of a still bigger genus of sequences covered by claim 24. Accordingly, Applicants submit that because the sequences of claims 24-30 share the technical features discussed above, Applicants respectfully request that claims 24-30 be examined together.

In view of the above remarks, it is respectfully requested that the Restriction Requirement be withdrawn and that all claims be allowed to be prosecuted in the same patent application. In the event that the requirement is made final and in order to comply with 37 C.F.R. § 1.143, Applicants reaffirm the election, with traverse, of claims 24-30 (Group IV) and SEQ ID NO: 3 (claims 26-30).

CONCLUSION

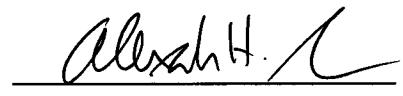
In view of the above remarks, early notification of a favorable consideration is respectfully requested.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Dated: July 16, 2007

By:


Robert M. Schulman
Registration No. 31,196

Alexander H. Spiegler
Registration No. 56,625

HUNTON & WILLIAMS LLP
Intellectual Property Department
1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)

RMS/AHS:ltm